

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/592,079	06/12/2000	Shanker V. Iyer	39293/JEC/X2	4884

35114 7590 08/06/2004

ALCATEL INTERNETWORKING, INC.
ALCATEL-INTELLECTUAL PROPERTY DEPARTMENT
3400 W. PLANO PARKWAY, MS LEGL2
PLANO, TX 75075

EXAMINER

WANG, LIANG CHE A

ART UNIT	PAPER NUMBER
----------	--------------

2155

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/592,079

Applicant(s)

IYER ET AL.

Examiner

Liang-che Alex Wang

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,7-9,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,7-9,15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 7-9, 15-16 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 7, 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable by Singh et al., US Patent Number 5,758,083, hereinafter Singh in view of Lee et al., "An expanded NAT with server connection ability", TENCON 99., Proceedings of the IEEE Region 10 Conference, hereinafter Lee, and in further views of Rowe et al., US Patent Number 6,466,941, hereinafter Rowe.
4. Referring to claim 1, Singh has taught a computer network comprising:

a first edge device (Col 22 line1, first network manager), coupled to a first physical private network (Col 22 line 1, private network is a network), the first edge device configured to create a first table with information of members network reachable through the first edge device (Col 22 lines 5-7), the first table being stored in a first database (Col 22 line 6, the first table must exist, since a table in a database is just blocks of memory being occupied, and the information being stored in the database must occupy some blocks of memory, which could be viewed as a table);

a second edge device (Col 22 lines 2, second network manager), coupled to a second physical private network (Col 22 lines 2-3, private network is a network), the second edge device configured to create a second table with information of member networks reachable through the second edge device (Col 22 lines 7-9), the second table being stored in a second database (Col 22 lines 7-9);

wherein, the first and second edge devices enable secure communication between the first and second private networks (Col 8 lines 31-35), and the first edge device shares the information of the member networks of the first table with the second edge device and the second edge device shares the information of the member networks of the second table with the first edge device (Col 22 lines 1-11)

wherein communication between the first and second physical private networks is managed according to a security policy associated with the first and second physical private networks (Col 8 lines 31-35), wherein the security policy is defined for a security policy group (Col 8 lines 31-35, distributed network managers is viewed as a security group), comprising one or more networks (Col 22 lines 1-3, first network and second network are the member networks since they could communicate to each other), and a rule controlling access to the member networks (Col 2 lines 15-17, Col 9 lines 61- Col 10 lines 3.)

Singh has not explicitly taught wherein the member networks include a group of one or more virtual private networks.

However, Lee has taught two edge devices (see page 1393 figure 7, NAT routers) connecting to a group of one or more VPNs (page 1393 Col 1, lines 16-18 states if two or

more inter-private network connections using NAT are available, running VPN will also be available. Also see the abstract)

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate the two databases of Singh in Lee such that to have member networks include a group of one or more virtual private networks because both Singh and Lee teach communications between two edge devices in an inter-networking environment. Singh contains an authorization list containing information indicating receiving machines are authorized to received the information (Col 2 lines 15-17), and Lee discloses that a VPN connection tables contains virtual IP headers to allow connections (page 1393, Col 1 bottom – Col 2 Top). They are similar in terms of their functionality.

A person with ordinary skill in the art would have been motivated to make the modification to Singh because having the VPN connection tables would allow Singh's system to authorize receiving devices by their virtual IP. Doing so would make the management of network be very easy and also can offer VPN with ease as taught by Lee (page 1393, Col 2, conclusion section.)

Furthermore, Singh in view of Lee has not taught the security group provides a hierarchical organization of groups and users allowed to access the system.

However, Rowe has taught a content management tool that provides a hierarchical arrangement of data tables (Col 20 lines 39-42) and allowed users to access the system (Col 21 lines 7-13.)

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to modify the teaching of Singh such that to have the security group provides a hierarchical organization of groups and users allowed to access the member networks because both Singh and Rowe have taught invention regarding to network database management, and Rowe provides a method of organizing the network database (see title).

A person with ordinary skill in the art would have been motivated to make the modification to Singh because having a hierarchical arrangement is one of the various of way to organize the context of a system, Rowe provide the hierarchical to allow user to have a better visualization with the organized data, which allow users to locate the information faster and easier. Therefore it would be obvious for Singh to use the hierarchical arrangement in Singh's system to provide the users a easy and fast way of locating information. Also, Rowe has taught the limitation of user allowed to access the database, this is a well known feature to have only the authorized users to be able to access the system in order to provide the security to the system, therefore, it would also be obvious for Singh to have users allowed to access the member networks in his invention.

5. Referring to claim 7, Singh as modified has further taught wherein each of the one or more virtual private networks has full connectivity with all other virtual networks (Col 22 lines 1-12, first network and second network has full connectivity with each other) and the security policy defined for the security group is automatically configured for each connection (Col 17 lines 10-15).

Art Unit: 2155

6. Referring to claim 9, Singh has taught in a computer network (figures 1 and 2), including a first edge device (Col 22 line1, first network manager), coupled to a first physical private network (Col 22 line 1, private network is a network) and a second edge device (Col 22 lines 2, second network manager), coupled to a second physical private network (Col 22 lines 2-3, private network is a network), the first and second edge devices enabling secure communication between the first and second physical private networks (Col 8 lines 31-35), a method for gathering network membership information comprising:
- a. defining a security policy for a security policy group (Col 8 lines 31-35, distributed network managers is viewed as a security group), and a rule controlling access to the member networks (Col 2 lines 15-17, Col 9 lines 61- Col 10 lines 3.)
 - b. creating a first table with information of a group of one or more network reachable through the first edge device (Col 22 lines 5-7);
 - c. storing the first table in the first database (Col 22 line 6);
 - d. creating a second table with information of a group of one or more network reachable through the second edge device (Col 22 lines 7-9);
 - e. storing the second table in the second database (Col 22 line 6);
 - f. sharing the information of the group of one or more networks of the first table with the second edge device (Col 22 lines 1-11); and
 - g. sharing the information of the group of one or more networks of the second table with the first edge device (Col 22 lines 1-11);

- h. wherein communication between the first and second physical private networks is managed according to a security policy associated with the first and second physical private networks (Col 8 lines 31-35.)

Singh has not explicitly taught wherein the member networks include a group of one or more virtual private networks.

However, Lee has taught two edge devices (see page 1393 figure 7, NAT routers) connecting to a group of one or more VPNs (page 1393 Col 1, lines 16-18 states if two or more inter-private network connections using NAT are available, running VPN will also be available. Also see the abstract)

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate the two databases of Singh in Lee such that to have member networks include a group of one or more virtual private networks because both Singh and Lee teach communications between two edge devices in an inter-networking environment. Singh contains an authorization list containing information indicating receiving machines are authorized to received the information (Col 2 lines 15-17), and Lee discloses that a VPN connection tables contains virtual IP headers to allow connections (page 1393, Col 1 bottom – Col 2 Top). They are similar in terms of their functionality.

A person with ordinary skill in the art would have been motivated to make the modification to Singh because having the VPN connection tables would allow Singh's system to authorize receiving devices by their virtual IP. Doing so would make the

management of network be very easy and also can offer VPN with ease as taught by Lee (page 1393, Col 2, conclusion section.)

Furthermore, Singh in view of Lee has not taught the security group provides a hierarchical organization of groups and users allowed to access the system.

However, Rowe has taught a content management tool that provides a hierarchical arrangement of data tables (Col 20 lines 39-42) and allowed users to access the system (Col 21 lines 7-13.)

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to modify the teaching of Singh such that to have the security group provides a hierarchical organization of groups and users allowed to access the member networks because both Singh and Rowe have taught invention regarding to network database management, and Rowe provides a method of organizing the network database (see title).

A person with ordinary skill in the art would have been motivated to make the modification to Singh because having a hierarchical arrangement is one of the various of way to organize the context of a system, Rowe provide the hierarchical to allow user to have a better visualization with the organized data, which allow users to locate the information faster and easier. Therefore it would be obvious for Singh to use the hierarchical arrangement in Singh's system to provide the users a easy and fast way of locating information. Also, Rowe has taught the limitation of user allowed to access the database, this is a well known feature to have only the authorized users to be able to access the system in order to provide the security to the system, therefore, it would also

Art Unit: 2155

be obvious for Singh to have users allowed to access the member networks in his invention.

7. Referring to claim 15, claim 15 encompasses the same scope of the invention as that of the claim 7. Therefore, claim 15 is rejected for the same reason as the claim 7.
8. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singh, in views of Lee and Rowe, in further views of Martino Jr. et al., US Patent Number 5,029,206, hereinafter Martino.
9. Referring to claim 8, Singh as modified has taught in invention as described in claim 6. Singh as modified has not taught wherein the security policy provides encryption of traffic among the one or more virtual private networks and the rule is a firewall rule providing access control of the encrypted traffic among the one or more virtual private networks.

However, Martino has taught encryption of traffic among networks, and rules providing access control of the encrypted traffic among the networks (Col 4 lines 27-38.)

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to modify the teaching of Singh in views of Rowe such that to have the security policy provides encryption of traffic among the member networks and the rule is a firewall rule providing access control of the encrypted traffic among the member networks.

A person with ordinary skill in the art would have been motivated to make the modification to Singh in views of Rowe because having encrypted traffic between

member networks and rules providing access control would enhance the network security as taught by Martino.

10. Referring to claim 16, claim 16 encompasses the same scope of the invention as that of the claim 8. Therefore, claim 16 is rejected for the same reason as the claim 8.

Response to Arguments

11. Applicant's arguments filed 07/02/2004, have been fully considered but they are not persuasive.

12. In that remarks, applicant's argues in substance:

- a. That: Examiner's reliance on Rowe is misplaced because Rowe merely discloses the organization of information, but not the organizational relationship between virtual private networks within a security policy group

This is found not persuasive because Singh in views of Lee teaches the system includes virtual private networks within a security policy group. Rowe teaches a content management tool that provides a hierarchical arrangement of data tables (Col 20 lines 39-42) and allowed users to access the system (Col 21 lines 7-13). This is the combination of Singh in views of Lee and Rowe that teaches the claim limitation not Rowe alone. Therefore applicant's argument is not persuasive. Rowe provides a hierarchical arrangement of data tables in a database, which is providing a method (hierarchical arrangement) to arrange a system or organization. And the examiner is motivated to provide this method to

the organization of Singh in views of Lee, because it allow users to locate the information faster and easier.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liang-che Alex Wang whose telephone number is (703) 305-8159. The examiner can normally be reached on Monday thru Friday, 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T Alam can be reached on (703)308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Liang-che Alex Wang *lw*
July 27, 2004


PATRICE WINDER
PRIMARY EXAMINER